

## APPENDIX F: WILDLIFE

**Table F-1. Wildlife Species Recorded in the WOS (WGFD 1996e) and by HWA on and within One Mile of the Cave Gulch-Bullfrog-Waltman Project Area.**

| Common Name                    | Scientific Name                      | WOS | HWA |
|--------------------------------|--------------------------------------|-----|-----|
| <u>Mammals</u>                 |                                      |     |     |
| Desert cottontail              | <i>Sylvilagus audubonii</i>          | x   | x   |
| White-tailed jackrabbit        | <i>Lepus townsendii</i>              | x   | x   |
| Least chipmunk                 | <i>Tamias minimus</i>                |     | x   |
| Wyoming ground squirrel        | <i>Spermophilis elegans</i>          | x   | x   |
| Thirteen-lined ground squirrel | <i>Spermophilis tridecemlineatus</i> |     | x   |
| White-tailed prairie dog       | <i>Cynomys leucurus</i>              | x   |     |
| Ord's kangaroo rat             | <i>Dipodomys ordii</i>               |     | x   |
| Deer mouse                     | <i>Peromyscus maniculatus</i>        |     | x   |
| Bushy-tailed woodrat           | <i>Neotoma cinerea</i>               |     | x   |
| Vole                           | <i>Microtus spp.</i>                 |     | x   |
| Coyote                         | <i>Canis latrans</i>                 |     | x   |
| Gray fox                       | <i>Urocyon cinereoargenteus</i>      | x   |     |
| Long-tailed weasel             | <i>Mustela frenata</i>               |     | x   |
| Badger                         | <i>Taxidea taxus</i>                 | x   |     |
| Striped skunk                  | <i>Mephitis mephitis</i>             | x   |     |
| Bobcat                         | <i>Felis rufus</i>                   | x   |     |
| Mule deer                      | <i>Odocoileus hemionus</i>           | x   | x   |
| Pronghorn                      | <i>Antilocapra americana</i>         | x   | x   |
| Elk                            | <i>Cervus elaphus</i>                | x   |     |
| <u>Birds</u>                   |                                      |     |     |
| Canada goose                   | <i>Branta canadensis</i>             | x   | x   |
| Green-winged teal              | <i>Anas crecca</i>                   |     | x   |
| Mallard                        | <i>Anas platyrhynchos</i>            |     | x   |
| Northern pintail               | <i>Anas acuta</i>                    | x   |     |
| American wigeon                | <i>Anas americana</i>                | x   |     |
| Bald eagle                     | <i>Haliaeetus leucocephalus</i>      |     | x   |
| Northern harrier               | <i>Circus cyaneus</i>                | x   | x   |
| Swainson's hawk                | <i>Buteo swainsoni</i>               | x   | x   |
| Red-tailed hawk                | <i>Buteo jamaicensis</i>             | x   | x   |
| Ferruginous hawk               | <i>Buteo regalis</i>                 | x   | x   |
| Rough-legged hawk              | <i>Buteo lagopus</i>                 |     | x   |
| Golden eagle                   | <i>Aquila chrysaetos</i>             | x   | x   |
| American kestrel               | <i>Falco sparverius</i>              | x   | x   |
| Prairie falcon                 | <i>Falco mexicanus</i>               | x   | x   |
| Great horned owl               | <i>Bubo virginianus</i>              |     | x   |
| Burrowing owl                  | <i>Athene cunicularia</i>            | x   | x   |
| Short-eared owl                | <i>Asio flammeus</i>                 |     | x   |
| Sage grouse                    | <i>Centrocercus urophasianus</i>     | x   | x   |
| Killdeer                       | <i>Charadrius vociferus</i>          | x   |     |
| Mourning dove                  | <i>Zenaidura macroura</i>            | x   | x   |
| Common nighthawk               | <i>Chordeiles minor</i>              | x   |     |
| Horned lark                    | <i>Eremophila alpestris</i>          | x   | x   |
| Barn swallow                   | <i>Hirundo rustica</i>               | x   |     |
| American crow                  | <i>Corvus brachyrhynchos</i>         | x   | x   |
| Common raven                   | <i>Corvus corax</i>                  |     | x   |
| Rock wren                      | <i>Salpinctes obsoletus</i>          |     | x   |
| Brewer's sparrow               | <i>Spizella breweri</i>              | x   | x   |
| Vesper sparrow                 | <i>Pooecetes gramineus</i>           | x   | x   |
| Western meadowlark             | <i>Sturnella neglecta</i>            | x   | x   |
| Brewer's blackbird             | <i>Euphagus cyanocephalus</i>        | x   |     |

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**Table F-2. Location and Status of Raptor Nests within the Greater Cave Gulch Raptor Analysis Area. (HWA 1996).**

| Nest No. | Species          | Legal Location            | Nest <sup>1</sup> |           | Status <sup>2</sup> |         |
|----------|------------------|---------------------------|-------------------|-----------|---------------------|---------|
|          |                  |                           | Condition         | Substrate | 1995                | 1996    |
| 1        | Ferruginous Hawk | NE SW SE Sec 25 T37N:R87W | Poor              | rock      | no                  | no      |
| 2        | Golden Eagle     | SE SE NE Sec 31 T37N:R86W | Good              | cliff     | visited             | VISITED |
| 3        | Ferruginous Hawk | NE SW SW Sec 30 T37N:R86W | Good              | rock      | visited             | no      |
| 4        | Ferruginous Hawk | NE SE SW Sec 30 T37N:R86W | Good              | rock      | visited             | VISITED |
| 5        | Golden Eagle     | NE NW NE Sec 8 T36N:R86W  | Good              | cliff     | no                  | PROD    |
| 6        | Ferruginous Hawk | NW NE NE Sec 31 T37N:R86W | Fair              | rock      | no                  | no      |
| 10       | Ferruginous Hawk | NW NE SW Sec 31 T37N:R86W | Fair              | rock      | no                  | no      |
| 11       | Ferruginous Hawk | SW NE SW Sec 32 T37N:R86W | Fair              | rock      | no                  | no      |
| 12a      | Ferruginous Hawk | NW SW SE Sec 32 T37N:R86W | Fair              | rock      | no                  | no      |
| 12b      | Ferruginous Hawk | NW SW SE Sec 32 T37N:R86W | Fair              | rock      | no                  | no      |
| 13       | Ferruginous Hawk | SE SE NE Sec 31 T37N:R86W | Poor              | rock      | no                  | no      |
| 14       | Red-tailed Hawk  | NE SE NW Sec 30 T37N:R86W | Fair              | rock      | failed <sup>3</sup> | FAILED  |
| 15       | Ferruginous Hawk | SE NW SE Sec 32 T37N:R86W | Good              | rock      | tended              | no      |
| 16       | Ferruginous Hawk | SE SW NE Sec 32 T37N:R86W | Fair              | rock      | no*                 | --      |
| 17       | Ferruginous Hawk | SE SE SE Sec 30 T37N:R86W | Poor              | rock      | no                  | no      |
| 18       | Ferruginous Hawk | NE NW NE Sec 31 T37N:R86W | Poor              | rock      | no                  | no      |
| 19       | Ferruginous Hawk | NW NE SW Sec 30 T37N:R86W | Poor              | rock      | no                  | no      |
| 20a      | Golden Eagle     | NW NE SW Sec 31 T37N:R86W | Fair              | cliff     | no                  | FAILED  |
| 20b      | Great-horned Owl | NW NE SW Sec 31 T37N:R86W | Good              | cliff     | no                  | PROD    |
| 21       | Ferruginous Hawk | SE SW NW Sec 5 T36N:R86W  | Poor              | rock      | no                  | no      |
| 22       | Ferruginous Hawk | NE NE NW Sec 5 T36N:R86W  | Fair              | rock      | no                  | no      |
| 23       | Ferruginous Hawk | SW SE SE Sec 6 T36N:R86W  | Poor              | rock      | no                  | no      |
| 24       | Ferruginous Hawk | NW SW SE Sec 31 T37N:R86W | Poor              | rock      | no                  | no      |
| 25a      | Ferruginous Hawk | SW SE NE Sec 6 T36N:R86W  | Poor              | rock      | visited             | no      |
| 25b      | Ferruginous Hawk | SW SE NE Sec 6 T36N:R86W  | Poor              | rock      | no                  | no      |
| 26       | Ferruginous Hawk | NE SE NE Sec 6 T36N:R86W  | Good              | rock      | tended              | VISITED |
| 27       | Golden Eagle     | NW SW NE Sec 8 T36N:R86W  | Good              | cliff     | no                  | no      |
| 28       | Ferruginous Hawk | SW SW SE Sec 12 T36N:R87W | Good              | rock      | no                  | no      |
| 29       | Ferruginous Hawk | NW NW NE Sec 13 T36N:R87W | Poor              | rock      | no                  | no      |
| 30       | Ferruginous Hawk | SW NW NE Sec 13 T36N:R87W | Good              | rock      | no                  | no      |
| 31       | Ferruginous Hawk | NW SW NE Sec 13 T36N:R87W | Good              | rock      | no                  | no      |
| 32       | Ferruginous Hawk | SE NW SE Sec 13 T36N:R87W | Good              | rock      | tended              | no      |
| 33       | Ferruginous Hawk | SE SW SE Sec 13 T36N:R87W | Good              | rock      | no                  | no      |
| 34       | Ferruginous Hawk | SE SW SE Sec 13 T36N:R87W | Good              | rock      | no                  | FAILED  |
| 35       | Ferruginous Hawk | SE SW SW Sec 14 T36N:R87W | Fair              | ground    | no                  | no      |
| 36       | Ferruginous Hawk | NE NW NW Sec 25 T36N:R87W | Good              | ground    | no                  | no      |
| 37       | Unknown Buteo    | NE SE NE Sec 07 T37N:R86W | Fair              | bush      | no                  | no      |
| 38       | Red-tailed Hawk  | NE NW SW Sec 14 T37N:R87W | Good              | tree      | Failed              | no      |
| 39       | Unknown Buteo    | NE NE SW Sec 13 T37N:R87W | Fair              | bank      | no                  | no      |
| 40       | Ferruginous Hawk | NE SW NW Sec 24 T37N:R87W | Fair              | ground    | no                  | no      |
| 41       | Ferruginous Hawk | NE SW NW Sec 24 T37N:R87W | Good              | rock      | Failed              | no      |
| 42       | Ferruginous Hawk | NW SW SW Sec 19 T37N:R86W | Poor              | ground    | no                  | no      |
| 43       | Red-tailed Hawk  | SW NE SW Sec 19 T37N:R86W | Good              | tree      | no                  | FAILED  |
| 44       | Red-tailed Hawk  | NE NW SW Sec 21 T37N:R86W | Fair              | tree      | no                  | no      |
| 45       | Ferruginous Hawk | SW SE NE Sec 29 T37N:R86W | Good              | ground    | no                  | no      |
| 46       | Ferruginous Hawk | SW SE NW Sec 28 T37N:R86W | Fair              | ground    | no                  | --      |
| 47       | Ferruginous Hawk | NW NW NE Sec 09 T36N:R86W | Poor              | rock      | no                  | no      |
| 48       | Unknown Buteo    | SE NE NW Sec 09 T36N:R86W | Fair              | cliff     | no                  | --      |
| 49       | Unknown Buteo    | NE SE NW Sec 09 T36N:R86W | Fair              | cliff     | no                  | --      |
| 50       | Ferruginous Hawk | SW NE NE Sec 09 T36N:R86W | Good              | rock      | no                  | no      |

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| Nest No. | Species          | Legal Location            | Nest <sup>1</sup> |           | Status <sup>2</sup> |          |
|----------|------------------|---------------------------|-------------------|-----------|---------------------|----------|
|          |                  |                           | Condition         | Substrate | 1995                | 1996     |
| 51       | Ferruginous Hawk | NW SW NW Sec 11 T36N:R86W | Good              | cliff     | no                  | no       |
| 52       | Ferruginous Hawk | NW SW NW Sec 11 T36N:R86W | Fair              | cliff     | no                  | no       |
| 53       | Ferruginous Hawk | NE SW SE Sec 09 T36N:R86W | Poor              | pillar    | no                  | no       |
| 54       | Ferruginous Hawk | SW SW SE Sec 10 T36N:R86W | Fair              | cliff     | no                  | no       |
| 55       | Ferruginous Hawk | NW NW NW Sec 15 T36N:R86W | Fair              | rock      | no                  | no       |
| 56       | Ferruginous Hawk | SW NE NW Sec 15 T36N:R86W | Good              | rock      | no                  | OCCUPIED |
| 57       | Ferruginous Hawk | NE SE NE Sec 17 T36N:R87W | Fair              | ground    | no                  | no       |
| 58       | Ferruginous Hawk | NW SE NE Sec 16 T36N:R87W | Poor              | ground    | no                  | no       |
| 59       | Ferruginous Hawk | NE NE NW Sec 34 T36N:R86W | Good              | ground    | no                  | no       |
| 60       | Ferruginous Hawk | SE NE NW Sec 34 T36N:R86W | Poor              | ground    | no                  | no       |
| 61       | Ferruginous Hawk | NW SE NW Sec 34 T36N:R86W | Fair              | rock      | no                  | no       |
| 62       | Ferruginous Hawk | NW SW SE Sec 34 T36N:R87W | Poor              | ground    | no                  | no       |
| 63       | Ferruginous Hawk | NE SW SE Sec 34 T36N:R87W | Fair              | ground    | no                  | no       |
| 64       | Ferruginous Hawk | SW SE NW Sec 03 T35N:R87W | Good              | ground    | no                  | no       |
| 65       | Ferruginous Hawk | NE NE SW Sec 03 T35N:R87W | Fair              | ground    | no                  | no       |
| 66       | Ferruginous Hawk | NW NE NE Sec 26 T36N:R87W | Poor              | ground    | --                  | no       |
| 67       | Ferruginous Hawk | NW NE NW Sec 14 T36N:R86W | Good              | rock      | --                  | no       |
| 68       | Red-tailed Hawk  | NW NE SW Sec 33 T37N:R86W | Good              | rock      | --                  | OCCUPIED |
| 69       | Ferruginous Hawk | SW NE SW Sec 16 T37N:R86W | Good              | tank      | --                  | PROD     |
| 70       | Ferruginous Hawk | SE NW SW Sec 8 T36N:R86W  | Fair              | bank      | --                  | no       |
| 71       | Ferruginous Hawk | NE SW SW Sec 8 T36N:R86W  | Good              | bank      | --                  | no       |
| 72       | Ferruginous Hawk | SW NW NE Sec 17 T36N:R86W | Good              | pillar    | --                  | FAILED   |
| 73       | Prairie Falcon   | SE NW SE Sec 8 T36N:R86W  | Good              | pillar    | --                  | OCCUPIED |
| 74       | Golden Eagle     | NW SE SE Sec 32 T38N:R86W | Fair              | cliff     | --                  | no       |
| 75       | Golden Eagle     | NE SW SE Sec 32 T38N:R86W | Fair              | cliff     | --                  | no       |
| 76       | Prairie Falcon   | NE NW NW Sec 04 T37N:R86W | Good              | cliff     | --                  | no       |
| 77       | Golden Eagle     | SE NW NW Sec 04 T37N:R86W | Poor              | cliff     | --                  | no       |
| 78       | Prairie Falcon   | NE SW NW Sec 04 T37N:R86W | Good              | cliff     | --                  | OCCUPIED |
| 79       | Red-tailed Hawk  | SE SW SE Sec 04 T37N:R86W | Good              | tree      | --                  | OCCUPIED |
| 80       | Unknown Buteo    | NE NE NE Sec 10 T37N:R86W | Fair              | tree      | --                  | no       |
| 81       | Golden Eagle     | NW NE NW Sec 11 T37N:R86W | Good              | tree      | --                  | no       |
| 82       | Unknown Buteo    | NW SW SE Sec 02 T37N:R86W | Fair              | cliff     | --                  | no       |
| 83       | Golden Eagle     | NW SW NE Sec03 T37N:R85W  | Good              | cliff     | --                  | OCCUPIED |
| 84       | Prairie Falcon   | SE NE SE Sec 03 T37N:R85W | Good              | cliff     | --                  | no       |
| 85       | Golden Eagle     | NW NW NE Sec14 T37N:R85W  | Poor              | cliff     | --                  | no       |
| 86       | Golden Eagle     | NW NW NE Sec 14 T37N:R85W | Good              | cliff     | --                  | no       |
| 87a      | Ferruginous Hawk | SW NW NE Sec 14 T37N:R85W | Fair              | cliff     | --                  | no       |
| 87b      | Ferruginous Hawk | SW NW NE Sec 14 T37N:R85W | Fair              | cliff     | --                  | no       |
| 88       | Golden Eagle     | NW SW NE Sec 14 T37N:R85W | Poor              | cliff     | --                  | no       |
| 89       | Golden Eagle     | NE SW NE Sec 14 T37N:R85W | Fair              | cliff     | --                  | no       |
| 90       | Golden Eagle     | NE SW NE Sec 14 T37N:R85W | Fair              | cliff     | --                  | no       |
| 91       | Golden Eagle     | NE SW NE Sec 14 T37N:R85W | Good              | cliff     | --                  | no       |
| 92       | Golden Eagle     | SE SW NE Sec 14 T37N:R85W | Poor              | cliff     | --                  | no       |
| 93       | Golden Eagle     | NE NE SW Sec 14 T37N:R85W | Poor              | cliff     | --                  | no       |
| 94       | Ferruginous Hawk | SW SW NW Sec 23 T37N:R85W | Fair              | ground    | --                  | no       |
| 95       | Ferruginous Hawk | SE NW SW Sec 24 T37N:R85W | Poor              | ground    | --                  | no       |
| 96       | Ferruginous Hawk | NW NW SW Sec 36 T37N:R85W | Poor              | bank      | --                  | no       |
| 97       | Ferruginous Hawk | NE SW NE Sec 34 T37N:R85W | Good              | bank      | --                  | OCCUPIED |
| 98       | Ferruginous Hawk | SE NW NW Sec 33 T37N:R85W | Poor              | tree      | --                  | no       |
| 99       | Ferruginous Hawk | NW SW NE Sec 29 T37N:R85W | Poor              | ground    | --                  | no       |

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| Nest No. | Species          | Legal Location            | Nest <sup>1</sup> |           | Status <sup>2</sup> |          |
|----------|------------------|---------------------------|-------------------|-----------|---------------------|----------|
|          |                  |                           | Condition         | Substrate | 1995                | 1996     |
| 100      | Ferruginous Hawk | SE NW NW Sec 29 T37N:R85W | Poor              | ground    | --                  | no       |
| 101      | Ferruginous Hawk | NE SW NW Sec 24 T37N:R86W | Fair              | ground    | --                  | no       |
| 102      | Ferruginous Hawk | NE NW SW Sec 24 T37N:R86W | Fair              | ground    | --                  | no       |
| 103      | Ferruginous Hawk | NW NW SE Sec 35 T37N:R86W | Good              | ground    | --                  | no       |
| 104      | Red-tailed Hawk  | SW NW NW Sec 23 T37N:R86W | Poor              | tree      | --                  | no       |
| 105      | Ferruginous Hawk | NE NW SE Sec 07 T36N:R86W | Poor              | bank      | --                  | no       |
| 106      | Unknown Buteo    | SE SW SE Sec 10 T36N:R86W | Good              | cliff     | --                  | no       |
| 107      | Ferruginous Hawk | SW SE SW Sec 11 T36N:R86W | Poor              | rock      | --                  | no       |
| 108      | Ferruginous Hawk | NE SE NW Sec 12 T36N:R86W | Poor              | ground    | --                  | no       |
| 109      | Ferruginous Hawk | NE SE NE Sec 14 T36N:R86W | Fair              | rock      | --                  | no       |
| 110      | Ferruginous Hawk | SE SW NE Sec 14 T36N:R86W | Fair              | rock      | --                  | no       |
| 111      | Ferruginous Hawk | SW SW SE Sec 14 T36N:R86W | Poor              | rock      | --                  | no       |
| 112      | Ferruginous Hawk | NE SW NW Sec 13 T36N:R86W | Good              | rock      | --                  | no       |
| 113      | Ferruginous Hawk | NE SE NW Sec 13 T36N:R86W | Fair              | rock      | --                  | no       |
| 114      | Ferruginous Hawk | SE NW NE Sec 13 T36N:R86W | Good              | rock      | --                  | OCCUPIED |
| 115      | Ferruginous Hawk | SW NW SE Sec 13 T36N:R86W | Fair              | rock      | --                  | no       |
| 116      | Ferruginous Hawk | NW NE SE Sec 13 T36N:R86W | Fair              | rock      | --                  | no       |
| 117      | Ferruginous Hawk | NW NE SW Sec 18 T36N:R85W | Poor              | rock      | --                  | no       |
| 118      | Ferruginous Hawk | NW NW SE Sec 18 T36N:R85W | Good              | rock      | --                  | no       |
| 119      | Ferruginous Hawk | NW NE SW Sec 23 T36N:R86W | Fair              | rock      | --                  | no       |
| 120      | Ferruginous Hawk | NE NW NE Sec 27 T36N:R86W | Fair              | ground    | --                  | no       |
| 121      | Ferruginous Hawk | NW SE SW Sec 24 T36N:R86W | Fair              | cliff     | --                  | no       |
| 122      | Ferruginous Hawk | SE NE SW Sec 24 T36N:R86W | Poor              | cliff     | --                  | no       |
| 123      | Ferruginous Hawk | SE NE NW Sec 25 T36N:R86W | Poor              | rock      | --                  | no       |
| 124      | Ferruginous Hawk | NE NE NW Sec 36 T36N:R86W | Good              | rock      | --                  | no       |
| 125      | Ferruginous Hawk | SW SE NE Sec 19 T36N:R85W | Fair              | rock      | --                  | no       |
| 126      | Golden Eagle     | SW NE SE Sec 30 T36N:R85W | Fair              | cliff     | --                  | no       |
| 127      | Ferruginous Hawk | NW NW SW Sec 29 T36N:R85W | Good              | rock      | --                  | no       |
| 128      | Ferruginous Hawk | SW NW SW Sec 13 T36N:R85W | Good              | ground    | --                  | OCCUPIED |
| 129      | Red-tailed Hawk  | SE NE NW Sec 23 T36N:R85W | Good              | tree      | --                  | OCCUPIED |
| 130      | Golden Eagle     | SE SE NW Sec 19 T36N:R84W | Good              | tree      | --                  | no       |
| 131      | Golden Eagle     | SE SE NW Sec 19 T36N:R84W | Good              | bank      | --                  | OCCUPIED |
| 132      | Ferruginous Hawk | NW NE NE Sec 32 T36N:R85W | Fair              | ground    | --                  | no       |
| 133      | Ferruginous Hawk | NE NE SE Sec 31 T36N:R85W | Good              | rock      | --                  | no       |
| 134      | Ferruginous Hawk | SE SW SW Sec 32 T36N:R85W | Good              | rock      | --                  | no       |
| 135      | Ferruginous Hawk | NE NE SE Sec 33 T36N:R86W | Poor              | ground    | --                  | no       |
| 136      | Ferruginous Hawk | SW NE SE Sec 33 T36N:R86W | Poor              | ground    | --                  | no       |
| 138      | Ferruginous Hawk | NW NE NW Sec 23 T36N:R87W | Fair              | ground    | --                  | no       |
| 139      | Ferruginous Hawk | NW SW NE Sec 22 T36N:R87W | Good              | ground    | --                  | no       |
| 140      | Ferruginous Hawk | NW SE SE Sec 27 T36N:R87W | Fair              | ground    | --                  | no       |
| 141      | Ferruginous Hawk | SE SW NW Sec 01 T35N:R87W | Good              | ground    | --                  | no       |
| 142      | Ferruginous Hawk | SW NW SW Sec 01 T35N:R87W | Fair              | ground    | --                  | no       |
| 143      | Ferruginous Hawk | SW NE NE Sec 11 T35N:R87W | Fair              | ground    | --                  | no       |
| 144      | Ferruginous Hawk | SE SE SW Sec 05 T35N:R86W | Poor              | ground    | --                  | no       |
| 145      | Ferruginous Hawk | SE SE SE Sec 03 T35N:R86W | Good              | rock      | --                  | no       |
| 146      | Unknown Buteo    | NE NW SW Sec 11 T35N:R86W | Good              | cliff     | --                  | no       |
| 147      | Golden Eagle     | SE NW SW Sec 11 T35N:R86W | Poor              | cliff     | --                  | no       |
| 148      | Ferruginous Hawk | SW NE SW Sec 01 T35N:R86W | Fair              | bank      | --                  | no       |
| 149      | Ferruginous Hawk | SW SW NW Sec 06 T35N:R85W | Good              | rock      | --                  | OCCUPIED |
| 150      | Ferruginous Hawk | NE NW SW Sec 06 T35N:R85W | Fair              | rock      | --                  | no       |

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| Nest No. | Species          | Legal Location            | Nest <sup>1</sup> |           | Status <sup>2</sup> |          |
|----------|------------------|---------------------------|-------------------|-----------|---------------------|----------|
|          |                  |                           | Condition         | Substrate | 1995                | 1996     |
| 151      | Ferruginous Hawk | SW NE SW Sec 06 T35N:R85W | Fair              | rock      | --                  | no       |
| 152      | Golden Eagle     | NE NW SE Sec 13 T35N:R86W | Good              | cliff     | --                  | OCCUPIED |
| 153      | Ferruginous Hawk | SE SW SW Sec 07 T35N:R85W | Fair              | rock      | --                  | no       |
| 154      | Golden Eagle     | SE NE NE Sec 07 T35N:R85W | Good              | cliff     | --                  | OCCUPIED |
| 155      | Ferruginous Hawk | SW NE SE Sec 05 T35N:R85W | Good              | rock      | --                  | OCCUPIED |
| 156a     | Golden Eagle     | NW SW NW Sec 09 T35N:R85W | Good              | cliff     | --                  | no       |
| 156b     | Golden Eagle     | NW SW NW Sec 09 T35N:R85W | Fair              | cliff     | --                  | no       |
| 157      | Ferruginous Hawk | NE SW SE Sec 04 T35N:R85W | Good              | cliff     | --                  | OCCUPIED |
| 158      | Ferruginous Hawk | NE SW NE Sec 16 T35N:R85W | Fair              | rock      | --                  | no       |
| 159      | Ferruginous Hawk | NW SE NW Sec 10 T35N:R85W | Good              | rock      | --                  | OCCUPIED |
| 160      | Ferruginous Hawk | SW SW SE Sec 11 T35N:R85W | Good              | ground    | --                  | no       |
| 161      | Ferruginous Hawk | SW NW SW Sec 22 T35N:R85W | Good              | rock      | --                  | no       |
| 162      | Unknown Buteo    | SW SE NW Sec 27 T35N:R85W | Good              | tree      | --                  | no       |
| 163      | Unknown Buteo    | NW SW NW Sec 25 T35N:R85W | Good              | tree      | --                  | no       |
| 164      | Ferruginous Hawk | SW SW SE Sec 24 T35N:R85W | Poor              | rock      | --                  | no       |
| 165      | Ferruginous Hawk | SE NE SW Sec 13 T35N:R85W | Good              | rock      | --                  | no       |
| 166      | Golden Eagle     | NW SE SW Sec 13 T35N:R85W | Fair              | rock      | --                  | no       |
| 167      | Golden Eagle     | NW SE SW Sec 13 T35N:R85W | Fair              | rock      | --                  | no       |
| 168      | Ferruginous Hawk | SW SE SE Sec 04 T35N:R87W | Poor              | rock      | --                  | no       |
| 169      | Ferruginous Hawk | NE SE NW Sec 10 T35N:R87W | Fair              | rock      | --                  | no       |
| 170      | Ferruginous Hawk | SW SE NE Sec 10 T35N:R87W | Good              | pillar    | --                  | PROD     |
| 171      | Ferruginous Hawk | NW NW NE Sec 04 T35N:R87W | Poor              | rock      | --                  | no       |
| 172      | Ferruginous Hawk | SE SW NE Sec 24 T37N:R87W | Fair              | rock      | --                  | no       |
| 173      | Ferruginous Hawk | SW NE NE Sec 16 T36N:R86W | Good              | rock      | --                  | no       |

<sup>1</sup> Nest condition in 1996 or last check

<sup>2</sup> no = Not occupied - no bird, eggs, or young  
Occupied = At least one egg laid or bird in incubating position.  
Visited = Bird standing on nest.  
Tended = Bird sitting in nest or building onto nest - no eggs laid.  
Failed = Abandoned eggs in nest or no surviving young.  
Prod = Productive - produced at least one young to fledging age.

\* Nest found destroyed 8/2/95

-- Nest not there, not found, or not checked.

<sup>3</sup> Canada Goose - 5 eggs laid and abandoned

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### United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Ecological Services  
4000 Morrie Avenue  
Cheyenne, Wyoming 82001

ES-61411  
rc/W.02(cgdb.blm)

October 9, 1996

Mr. Oliver John Grah  
Ecotone Environmental Consulting, Inc.  
123 East 200 North  
P.O. Box 3516  
Logan, Utah 84321

Dear Mr. Grah:

Thank you for your letter of September 13 regarding the proposed Cave Gulch/Waltman Draw/Bullfrog Natural Gas Field located approximately 50 miles west of Casper, Wyoming, specifically Sections 19-21, 28-30, and 31-33 of T37N R86W; Sections 23, 24, 25, 26, 35, and 36 of T37N R87W; Sections 5, 6, 7, 8, 17, 18, 19, 20, 29, and 30 of T36N R86W; and Sections 1-3, 10-12, 13-15, 22-24, and 25-27 of T36N R87W. I have concerns with the following issues, and request that they receive full treatment in the analysis of this project.

**Cumulative Impacts:** I am concerned that oil and gas development in Wyoming is proceeding at a pace, and to an extent, detrimental to wildlife and its habitat. Evaluation of impacts associated with one or two projects at a time does not permit adequate quantification of total affect(s) to the resource. An analysis based on incremental development typically gives an impression much as one might get by viewing a desert by one grain of sand at a time, the magnitude of its sum pieces never considered in the final analysis. The cumulative analysis should include, but is not limited to a detailed description of baseline conditions in the project vicinity. Conditions such as species distribution, territories, population estimates, habitat availability and prey abundance should be included in the overall analysis.

**Wetland Impacts:** I am concerned that wetlands may be impacted by the proposed project. In meeting its responsibilities for wetland protection and conservation, the Bureau of Land Management must assure that proposed activities do not result in the taking of any Federal trust wildlife resources nor lead to the contamination of other water sources. Action should be taken to avoid or mitigate any wetland losses in accordance with section 404 of the Clean Water Act, the Fish and Wildlife Coordination Act, Executive Order 11990 (wetland protection) and Executive Order 11988 (floodplain management). If wetlands may be impacted by the proposed action, those wetlands in the project area should be inventoried and fully described in terms of functions and values. Acreage of wetlands, by type, should be

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disclosed and specific actions outlined to avoid, minimize, and compensate for unavoidable wetland impacts.

This office recommends that you request assistance from the U.S. Army Corps of Engineers to determine whether a section 404 Clean Water Act permit will be required for the proposed work. Under section 404(b)(1) guidelines of the Clean Water Act, the analysis should describe alternative actions which avoid, minimize, and compensate for unavoidable wetland impacts. The Fish and Wildlife Service (Service) will participate in review of any application for a section 404 permit. I advise early consultation with the Service and other appropriate agencies on wetland matters. If wetlands are involved but the Corps determines that an individual permit is not required, you should ensure that the intent of section 404 of the Clean Water Act is met. Wetland issues should be disclosed and addressed in the analysis even if a section 404 permit is not required.

**Endangered Species:** In accordance with section 7(c) of the Endangered Species Act of 1973, as amended (ESA), the following threatened or endangered species may be present in the project area.

| <u>Species</u>                                     | <u>Status</u> | <u>Expected Occurrence</u>   |
|--|---------------|--|
| Black-footed ferret<br>( <i>Mustela nigripes</i> ) | Endangered    | Potential resident in prairie<br>dog ( <i>Cynomys</i> sp.) colonies. |

Black-footed ferrets may be effected if prairie dog colonies are impacted. Black-footed ferrets are dependent on prairie dogs for prey , and for shelter in deserted burrows. If black-tailed prairie dog (*Cynomys ludovicianus*) colonies or complexes greater than 79 acres or white-tailed prairie dog (*C. leucurus*) colonies or complexes greater than 200 acres will be disturbed, surveys for ferrets should be conducted. This is true even if only a portion of the colony or complex will be disturbed. If a field check indicates that prairie dog towns may be impacted, you should contact us for guidance on ferret surveys. Prairie dog colonies are an important part of prairie ecology and other species are dependent upon them for food as a prey source, for shelter in vacant burrows, and for the modification of grasslands to suitable/ preferred habitat. Other species that may be found in residence of prairie dog towns are cottontail rabbits, burrowing owls, grasshopper sparrows, meadowlarks and the mountain plover. In accordance with the Service's 1989 Black-footed Ferret Survey Guidelines, mapping of the complexes should occur early in the planning process as the size and distribution of the complexes will help determine the need for surveys, as well as the value of the complex to future reintroduction efforts. The need for surveys can be addressed after the mapping is complete and site specific plans for development are generated.

**Raptors:** Please recognize that consultation on listed species does not preclude your obligation to protect the many species of birds, raptors, and eagles also protected under the Migratory Bird Treaty Act and Bald Eagle Protection Act. The Migratory Bird Treaty Act, 16 U.S.C. 703, enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations. The Bald Eagle Protection Act, 16 U.S.C.

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668, prohibits taking of any bald or golden eagles or their body parts, nests, or eggs, which includes collection, molestation, disturbance, or killing activities. Violation of these prohibitions is a criminal violation regardless of where the activity occurs, whether on public or private lands.

If it appears that wetlands, nests, or nest trees may be affected by the proposed project (if a road or activity will occur in the vicinity of a nest, etc.), you need to coordinate with our office prior to doing any work in these areas. To minimize impacts on nesting raptors and the possibility of "take" under the Migratory Bird Treaty Act, the Service believes protective measures for raptors are necessary and best accomplished through development of a raptor management/mitigation plan outlining specific measures to minimize impacts and the potential for "take."

**Candidate species:** Candidate species that may occur within the project area are identified below. Many Federal agencies have policies to protect candidate species from further population declines. I would appreciate receiving any information available on the status of these species in or near the project area.

Candidate Species

Swift fox

*Vulpes velox*

Mountain plover

*Charadrius montanus*

Expected Occurrence

Grasslands of east Wyoming

Grasslands statewide

**Mountain plover:** The Service has recently completed a review of the status of the mountain plover. Available data indicate that population numbers are declining range wide and suggest that listing action may be warranted. Because listing of the species may be imminent, the Service recommends surveys for mountain plovers in all suitable habitat, as well as avoidance of nesting sites to minimize negative impacts to nesting birds. Mountain plover breeding and wintering habitats are known to include grasslands, mixed grassland areas and short grass prairie, shrub-steppe, plains, alkali flats, agricultural lands, cultivated lands, sod farms and prairie dog towns. Plovers may nest on sites where vegetation is sparse to bare, or near closely cropped areas, manure piles or rocky areas. Mountain plovers are rarely found near water and show a preference for previously disturbed areas or modified habitat.

**Recommendations for mountain plover protection are as follows:**

- \* Detailed visual observation of the area within 1/4 mile of a proposed disturbance and 100 yards of proposed access routes should be made to detect presence of plovers. All plovers located should be observed long enough to determine if a nest is present. Where possible, and not prohibited, these observations should be made from a stationary vehicle, as plovers do not appear to fear vehicles.
- \* If no visual observations are made, the area should be surveyed on foot. Extreme care should be exercised to locate plovers, due to their highly secretive and quiet nature.



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- \* Surveys should be conducted no more than 14 days prior to the date actual construction activities begin. If two surveys are required, they should be made at least 14 days apart, with the last survey no more than 14 days prior to the start-up date.
- \* The number of surveys required to clear a site for mountain plovers prior to beginning a planned activity is dependent upon start-up date, as shown below.

| <u>Date of planned activity</u> | <u>Number of surveys</u> |
|---------------------------------|--------------------------|
| March 15 through April 15       | 1                        |
| April 15 through July 15        | 2                        |
| July 15 through August 15       | 1                        |

- \* If an active nest is found in the survey area, the planned activity should be delayed at least 30 days. If a brood is observed, activities should be delayed at least seven days.
- \* Grading activities and new road construction should be minimized during the period from May 25 through June 30 to lessen hazards to early developing chicks. More activity was identified on established roads than on 2-tracks.

Section 7(c): ESA requires that Federal agencies proposing major construction actions complete a biological assessment to determine the effects of the proposed actions on listed and proposed species. If a biological assessment is not required (i.e., all other actions), the lead agency is responsible for review of proposed activities to determine whether listed species will be affected. I would appreciate the opportunity to review your determination document.

For those actions where a biological assessment is necessary, it should be completed within 180 days of initiation, but can be extended by mutual agreement between your agency and the Service. If the assessment is not initiated within 90 days, the list of threatened and endangered species should be verified with this office prior to initiation of the assessment. The biological assessment may be undertaken as part of the agency's compliance of section 102 of the National Environmental Policy Act (NEPA), and incorporated into the NEPA documents. The Service recommends that biological assessments include:

1. a description of the project;
2. a description of the specific area potentially affected by the action;
3. the current status, habitat use, and behavior of threatened and endangered species in the project area;
4. discussion of the methods used to determine the information in item 3;
5. direct and indirect impacts of the project to threatened and endangered species;
6. an analysis of the effects of the action on listed and proposed species and their habitats including cumulative impacts from Federal, State, or private projects in the area;
7. coordination measures that will reduce/eliminate adverse impacts to threatened and endangered species;

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8. the expected status of threatened and endangered species in the future (short and long term) during and after project completion;
9. determination of "is likely to adversely affect" or "is not likely to adversely affect" for listed species;
10. determination of "is likely to jeopardize" or "is not likely to jeopardize" for proposed species;
11. citation of literature and personal contacts used in assessment.

If it is determined that any agency program or project "is likely to adversely affect" any listed species, formal consultation should be initiated with this office. If it is concluded that the project "is not likely to adversely affect" listed species, I should be asked to review the assessment and concur with the determination of no adverse effect.

A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare biological assessments. However, the ultimate responsibility for section 7 compliance remains with the Federal agency, and written notice should be provided to the Service upon such a designation. I recommend that Federal agencies provide their non-Federal representatives with proper guidance and oversight during preparation of biological assessments and evaluation of potential impacts to listed species.

Section 7(d) of ESA requires that the Federal agency and permit or license applicant shall not make any irreversible or irretrievable commitment of resources which would preclude the formulation of reasonable and prudent alternatives until consultation on listed species is completed.

**Water Quality/Habitat Quality:** I am concerned with water quality impacts of the proposed project, particularly with respect to their effects on fisheries, migratory birds, and Federally listed threatened or endangered species. The analysis should describe project activities that may affect water quality or that have the potential to expose fish and wildlife to hazardous substances. Such activities may include, but are not limited to: wastewater discharges, transportation of hazardous materials, spills, and evaporation ponds. Since selenium is a commonly detected trace element in Wyoming and has been detected in varying concentrations in ground and surface waters and soils, the analysis should assess, if appropriate, the project's potential to mobilize selenium and cause bio-accumulation in the food chain.

**Fish and Wildlife:** Short-term and long-term impacts of the proposed project on fish and wildlife and their habitats should be given full treatment in the analysis. In addition to assessing impacts to candidate, threatened, and endangered species, the analysis should address impacts to nesting raptors and other migratory birds.

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These preliminary scoping comments are made pursuant to the National Environmental Policy Act, the Endangered Species Act and Fish and Wildlife Coordination Act. Please keep this office informed of any developments or decisions concerning this project. If you have any questions, please contact me or Mary Jennings of my staff at the letterhead address or phone (307) 772-2374.

Sincerely,



Charles P. Davis  
Field Supervisor  
Wyoming State Office

cc: Director, WGFD, Cheyenne, WY  
Nongame Coordinator, WGFD, Lander, WY